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ABSTRACT

The evaluation of distance education courses at the FernUniversitat was an important focus of interest during the initial stages of its development (1974-1980), when courses were being developed for five major departments and the number of students enrolled was increasing rapidly. Since teaching began immediately, a formative evaluation approach was adopted. In the beginning, evaluations of courses were conducted using two instruments--standardized questionnaires, which were adapted for processing by optical scanners in 1976, and a form for student critiques of the course materials (the "course critic"). Since 1980 there has been a growing tendency away from the use of the standardized questionnaires since they do not provide the in-depth formative data required by course developers for making revisions. Prior to 1986, the course critic was typically administered to a sample of five to eight volunteers enrolled in a course. Pilot tests were also conducted for a period of three years using a tape-recorded version of the instrument, but processing the data proved to be too formidable a task for course developers. Since then, the written course critic has been standardized, and all of the students enrolled in a course are invited to respond; however, the number of students who do so is low. Course evaluation has slowed down in recent years as the responsibility for the evaluations has shifted from social researchers, for whom the evaluations were their main field of work, to the subject specialists, for many of whom the evaluations are a low priority as they are experienced authors and feel that their study materials are well prepared. (GL)

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La Planificacion, la Produccion y la Evaluacion del Material Didactico en un Sistema de Educacion a Distancia

San Jose', Costa Rica 18 - 21 abril 1989

Methods and Experiences with Course Evaluation at the FernUniversität

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by Jörn Bartels

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

First of all I like to thank for the very kind invitation from Mr. Guillermo Vargas of the UNED which gave me the opportunity to participate at this conference. It is a great honour for me to give one of the lectures.

I like to congratulate the organizers for choosing the topic of this conference, namely "The planning, production, and the evaluation of course material in distance education". I think this is the very first time that a conference will discuss these very important topics in this brought way and I hope the results of the discussions will be very fruitful for our practical work at our home institutions.

I would like to talk about "Methods and experiences with course evaluation at the FernUniversität". The FernUniversität has been founded at the end of 1974 by the State of North Rhine-Westphalia which is part of the Federal Republik of Germany. This distance teaching university started only a short time later, namely in

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October 1975. In that first study year some 1,331 students were enrolled. At present there are more than 36,000 students at the FernUniversität.

There are five major departments offering three- or four-year degree courses. These are the Department of Economics, Department of Mathematics and Computer Sciences, the Department of Electrical Engineering, the Department of Education, Social Sciences and Humanities, and the Department of Law.

Evaluation has always been an integral part of the concept of distance education at the FernUniversität. By the law of the FernUniversität the "Center for the Developing of Distance Education" was assigned the task of carrying out evaluation research, focussing on the following areas of interest:

- The evaluation of individual courses with the aim of improving the material sent out to students (course evaluation)

- the evaluation of the organizational and institutional aspects of distance education

- the evaluation of the teaching system, research into drop-out, degree students, access to computers, learning conditions, and so on (system evaluation).

During the initial stages of the FernUniversität's development, one important focus of interest was course evaluation. Today, course evaluation is done only on a very low level and the research interests are developed more into another direction like

the evaluation of the teaching system. We call this field "system evaluation". The shift in emphasis is mainly due to the fact that the expansion of the FernUniversität has slowed down quite dramatically and fewer courses are introduced or rewritten as curricula have been completed for various degree courses.

The courses at the FernUniversität are developed under the full responsibility of individual professors although their draft course material has to be approved by a department council before printing. In the first time of the FernUniversität also some central institutes, like the "Center for the Developing of Distance Education" and the "Institute for Research into Distance Study", had to approve the course material. But this policy changed because the members of the departments thought that they have built up in the past enough own competences in writing and preparing course material. At present therefore they consider assistance of central institutes less important in that area than in the foundation phase.

While in the initial stage at the FernUniversität a larger proportion of course-authors had to be drawn from other German universities, actually the number of courses prepared by internal members of the FernUniversität has increased. Nevertheless, there will always be a considerable number of courses written by external authors, because in this way the departments can be more flexible in setting up new courses and in accommodating the plurality of theories or viewpoints essential in academic teaching.

At the FernUniversität, like the German university tradition, the professors take the lead either as author or coordinator of mate-

rial provided by external authors. The collaboration between various specialists during course development is informal. There are specialists for visual design and instructional development offering their assistance. They are not incorporated in the departments, but are grouped together in a separate "Center for the Developing of Distance Education".

In general, most of the course material of the FernUniversität has gained an excellent reputation. Students and university teachers from other universities often enrol with the FernUniversität to obtain the course material. As professors in our system try to compete with their colleagues from conventional universities the level of the course material may meets very often very high academically standards but may not be enough student orientated. The low graduation rates at the FernUniversität are a sign of this matter.

The fact that the FernUniversität took up teaching immediately precluded a prolonged phase of course development before courses became part of the curriculum. Of necessity, therefore were developed an evaluation approach of formative evaluation (post-testing), taking into account that research had to be carried out after a course had been completed. An advantage to this is that the FernUniversität conducts research while the students are actually working on the course. Therefore, the research does not take the form of lab experiments or other controlled forms of investigations. Rather, it is carried out with students working on the course under normal conditions. The results of this kind of evaluation therefore reflect the actual study situation of real-life students.

In order to cope with the large number of new or revised course units in the starting phase of the FernUniversität, standard procedures of course evaluation were developed which consisted predominantly of two instruments for routine evaluation. One of this was a standardized questionnaire; the other was a student assessment of the course material ("course critic"). These two instruments were used separately or in conjunction with each other.

From the beginning the FernUniversität used a standardized questionnaire in course evaluation. The primary function of this questionnaire has been to supply preliminary data on the strengths and weaknesses of a given course unit and to point out problem areas which need to be studied in greater detail. The use of a standard form to collect this data provided at least a rough and quick indication of problems and difficulties encountered by students. Often it served as a basis for planning more detailed evaluation research, being supplemented mainly by the second routine instrument, course critic, for a closer investigation into the nature of the difficulties shown up by the questionnaire.

As early as 1976 it became clear that the administration of the standardized questionnaire as well as the data processing were increasingly difficult due to rapidly increasing numbers of students and courses. It was consequently decided to make use of the FernUniversität's "Optical Mark Reader" (OMR) and to design a questionnaire that could be read automatically by this machine. In terms of saving time there were two advantages: Firstly, the data could be processed automatically and thus be made available more quickly either as a basis for revision or for the planning of fur-

ther research. Secondly, an OMR-questionnaire could be administered directly by the computer center with help of a computer program.

The standardized questionnaire was sent to all students enrolled in a given course or in case of courses with high student numbers to a sample of students was drawn. The students were asked to fill in a separate form for each course unit and to return it as soon as they have completed work on the unit. As questionnaires frequently were sent back together with assignments, the rate of response tended to vary with the working discipline of students, that meant, students not taking a course for credit or students not completing a course were likely to be among the non-respondents. In the first study year of the FernUniversität the response rate in course evaluation was in average 37 %. Some years later the response rate was less than ten per cent.

The standardized questionnaire covered the following aspects of the course material:

- course design and presentation of the written material
- previous knowledge of the course content
- comprehension of the text
- use of learning aids
- subjective degree of difficulty
- time spent on working through the course
- problematic pages/chapters.

In addition, the respondents were asked to fill in their student status.

After being processed by the "Optical Mark Reader" and stored on disk, the data were analysed with the help of SPSS ("Statistical Package for the Social Sciences"). There was a standard procedure but often additional analyses were found necessary because of special characteristics either in the course itself or in the student population enrolled in that particular course.

Since the beginning of 1980 there was a growing tendency away from evaluation with standardized questionnaires. The reason was simply that the results of theses investigations were misunderstood because they were too general. The authors said they couldn't use these results for the revision of the course units. But this evaluation method never had the aim to give concrete answers to the problems of the students with the study material. The aim was from the beginning to receive rough indications of problems and difficulties relatively quickly so that it was possible to make a follow-up study to "problem courses" or "problem units" of a course. Since 1984 no longer exists the wish in departments to get that basic information by this standardized questionnaire. For this reason this questionnaire is no longer in use.

The second instrument routinely implemented in course evaluation is the so-called student assessment of courses, the course critic. With this instrument it is possible to provide detailed and specific information which can be used directly as a basis for the revision of course material. In their course critics, the students comment on the quality of the course units. They point out mistakes and passages which were too difficult or confusing or badly

presented; they explain where they would have needed extra help such as graphics, tables, and explanations; they write down whether the learning objectives were realistic.

Unlike the standardized questionnaire, course critic is not implemented as a survey tool. If a given course is to be assessed by students, an average of five to eight students enrolled in the course was chosen. Participation is voluntary, and a small amount of money is paid to participants.

Up to 1985 students doing course critic received an extra set of the course material. As they were working through a course unit, they were asked to write notes and comments into a second copy, adding a summary of the unit after completion. Since 1986 the course critic is also standardized because participants receive currently no longer a second set of course material but for every course unit a sheet of paper to write their general and specific comments to the course units. By the revised method all interested students can do the course critic. The experience shows the number of interested students is very low who like to participate in course critic.

The participants receive an extensive catalogue of instructions referring to different aspects of this material, such as:

- text comprehension
- use of learning aids
- presentation of the study content
- assignments
- learning objectives.

After the students have returned their copies with the comments and notes, a reference copy is prepared for the author. This guarantees anonymity of the participants and provides a handy overview of all the criticisms. An author looking through such a reference copy can locate quickly and easily those parts of the text that are judged by the students to be in need of revision. In the case of the currently used method of course critic the course evaluation coordinator sends all returned sheets to the author of the evaluated course which he or she received from the participants.

Course critic does not claim to be in any way representative, but it does point to specific problems experienced by some students in their work with the material. It identifies factual errors and mistakes in the manuscript as well as presenting a more subjective picture of the contents and presentation of the material covered. Together, these pieces of information proved useful for revision.

Since some students felt more comfortable dictating their comments on a tape rather than writing them down, there was conducted for a period of three years a pilot project on "oral course critic". Participants received blank audio cassettes with some personal statements and taped their notes as they worked through the course unit. The tapes were than transcribed and a copy of this transcription was given to the author together with other evaluation results.

Most course authors were very interested in this type of course evaluation because some of the students made a very detailed and lively critic. In most cases the oral course critic was more fruitful than the written one. But, the academics have had much

more work with the oral course critic. As the responsibility for the course evaluation changed to other academics they stopped this indeed successful pilot project and implemented the more standardized way of course critic.

In the past there were used at the FernUniversität for some years course specific questionnaires because authors have asked to have certain aspects of their courses studied in greater detail. Specific or unit-related questionnaires may be used individually or in combination with other research instruments. They tend to require more time to design, administer and process than standard forms.

In the last five years there has been a trend away from quantitative evaluation to more qualitative evaluation. The reason lies in the fact that course authors are more inclined to accept results which can be directly translated into the revision of the course. They tend to be more interested in students' comments and detailed criticism than they are in a generalized statistical presentation of survey findings which do not supply a tangible guideline for concrete changes.

At the end of my lecture I like to comment some recent developments in course evaluation at the FernUniversität. I said earlier that course evaluation slowed down at our university. The reason for this needs some explanations. First of all, the reason for this development is the result of the changed responsibility within the field of course evaluation. While in the first years social researchers were responsible for course evaluation, now the subject specialists do this job. The social researchers had more gen-

eral interest to evaluate the courses because they saw the chance to help the students to better their learning conditions. Course evaluation was their main field of work. Other activities had a lower priority. On the other hand, the subject specialists are more inclined in other activities, for example into the production of TV-programs. For this reason, course evaluation has in their work only a relatively low priority. The result is, that course evaluation exist actually at the FernUniversität but only with a minimum of emphasis. But most of our departments (except the department of education, social sciences and humanities) agree with this policy because they think that they develop very well prepared study material. For this reason an intensive course evaluation is no longer considered necessary.

New course authors are furthermore interested in course evaluation because they are unsure whether their written courses fulfill the standard of being self-instructional materials. Authors with more experience in writing a course have more the feeling to know everything about writing a good course. Therefore they don't attach importance to the results of course evaluation.

Another point is also very important to understand the relevance of course evaluation at the FernUniversität. Professors at German universities have the freedom of research and instruction. This means that a professor may accept the results of course evaluation in the revision of a course, but that he or she doesn't has to accept the student criticism. The professor is absolutely free in his or her decision.

In the first year of the FernUniversität there existed in the contracts of the external authors a very interested paragraph. This paragraph said that the authors receive the full money for writing a course only if the results of course evaluation were incorporated into a revised version. If the author didn't accept the critic of students than he or she had to give reasons why the critic seems to be irrelevant. If the department accepted these reasons than the full amount of money was paid otherwise the administration made a reduction. The FernUniversität has practiced this method only for one year although it seemed to be in my eyes a good form of pressure to revise the study material. But you can use this method only for external but not for internal authors. For this reason the course evaluators prefer to work together only with those authors who are cooperative and have indicated their willingness to accept student criticism and to incorporate it in their revision of the study material. To do course evaluation just out of the reason to do something about course evaluation is waste of time and means working for the paper basket.